

## U.S. ARMY ENGINEER DISTRICT, NORFOLK

CORPS OF ENGINEERS FOOT OF FRONT STREET NORFOLK 10. VIRGINIA

56809

NACOP-R

28 May 1965

SUBJECT:

Waste Discharge from Acetylene Gas Generation at Norfolk Naval

Shipyard

TO:

Commanding Officer Norfolk Naval Shipyard

Code 400

Portsmouth, Virginia 23709

- 1. Reference is made to recent inquiry from Mr. J. Shannon of the Public Works Office of the Norfolk Naval Shipyard relative to the discharge of acetylene gas generation wastes into a tributary of the Southern Branch of the Elizabeth River.
- 2. This waste presently discharges to a small creek adjacent to the Atlantic Creosoting Company's plant. The wastes consist of calcium hydroxide, calcium carbonate and some oxides of iron and aluminum. These materials constitute about four percent of the total sludge discharged; the remainder being water. Approximately 1,100 gallons of this waste is discharged daily.
- 3. The effect of this waste on the water quality of the river is not considered of importance. The waste will have a tendency to raise the pH of the water but considering the dilution of the river, such increase will be small. The waste has been discharged for several years and no alkalinity problem has been evident from past analyses which have shown pH's in the 6.5 - 7.5 range. Aquatic life is generally tolerant to pH's up to 8.5. Because of the insolubility of the constituent, however, this waste does coat river banks and will in time cause shoaling. The necessity for frequent cleaning of the present ditch bears this out.
- 4. Because of the shoaling effect and the fact that such discharge is continuous, this office considers the discharge of this waste a violation of the Federal Refuse Act of 1899 and recommends that such waste be discharged to a lagoon or other holding tank for treatment.

FOR THE SUPERVISOR OF THE HARBOR:

ny6/11345; ny6/5800 400-446

E. K. JACKSON Assistant Supervisor of the

Harbor of Hampton Roads

AR101594

## U. S. ARMY ENGINEER DISTRICT, NORFOLK

J. M. FARRIN .

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Assistant Supervisor of the Harbor of Hampton Roads